# Management of persons with co-occurring severe mental illness and substance use disorder: program implications

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*Adults with severe mental illness have extraordinarily high rates of co-occurring substance use disorders, typically around 50% or more, which adversely affect their current adjustment, course, and outcome. Separate and parallel mental health and substance abuse treatment systems do not offer interventions that are accessible, integrated, and tailored for the presence of co-occurrence. Recent integrated interventions for this population have the specific goal of ameliorating substance use disorder and the general goal of improving adjustment and quality of life. The authors overview the current research and offer guidelines related to mission and philosophy, leadership, comprehensive reorganization, training, specific programs, and quality improvement.*

**Key words:** Dual diagnosis, severe mental illness, substance use disorder, integrated interventions

***(World Psychiatry 2007;6:131-136)***

The ubiquitous interconnections and adverse interactions between mental illnesses and substance use disorders have been documented for over 25 years (1,2). The large population of persons with co-occurring disorders is enormously heterogeneous in regard to type and severity of mental illness and substance use disorder, psychosocial skills and supports, and many other factors (3,4).

Providing services for persons with co-occurring disorders presents a dilemma. In the traditional system of parallel substance abuse and mental health services, few clients are able to access needed treatments for both disorders, and the services are rarely tailored to address the common interactive elements of co-occurrence (5). Therefore, clinicians and researchers have developed a number of strategies that combine, or integrate, mental health and substance abuse interventions. Recent reviews have identified dozens of controlled studies examining a range of psychosocial interventions (6-8) or pharmacological interventions (9) for these people. In addition, the National Evidence-Based Practices Project studied in detail the process of implementation of services for people with co-occurring disorders across several treatment settings (10). Only a few years ago, clinical guidelines called for integrating mental health and substance abuse interventions generically, without specific guidelines for clinical subgroups (11). In this article, we overview recent research and consider the implications for programs providing services to adult clients who have severe mental illness and substance use disorder.

## RESEARCH ON CO-OCCURRING SEVERE MENTAL ILLNESS AND SUBSTANCE USE DISORDER

### Definitions

"Severe mental illness" is a widely used expression that includes diagnosis, disability, and duration (12,13). In the U.S., most public mental health programs require these criteria for admission, which closely parallel Social Security Administration criteria for disability payments and public insurance (14). Diagnosis encompasses major mental disorders, such as schizophrenia, severe bipolar disorder, and severe depression. Disability indicates serious inability to meet adult role requirements, such as functioning in work, relationships, and self-care. Duration usually entails at least two years of disability. Major mental disorders and substance use disorders are usually defined according to the standard nomenclature of the Diagnostic and Statistical Manual (15). Substance use disorders include abuse or dependence on alcohol or other psychoactive drugs, including prescribed medications used in greater amounts than indicated (and usually excluding nicotine use disorder). Several terms, including dual diagnosis, dual disorders, and co-occurring disorders, are widely used to describe clients who have co-occurring severe mental illness and substance use disorder. In this article, we use these three terms interchangeably.

Interventions for mental illness and substance use disorder include treatments and rehabilitation. Treatments are medications or psychosocial strategies aimed at controlling or eliminating the symptoms or causes of illness or disorder; rehabilitation interventions are intended to improve skills and supports to enable persons to overcome the disabilities associated with illness or disorder. Treatment and rehabilitation overlap considerably.

Recovery has become a dominant concept in the health care system, but has not been consistently defined. It refers to a process of overcoming illness, rather than merely controlling symptoms, and moving beyond illness to pursue a satisfying and meaningful life (16-19). The term recovery is variously used for inspiration, advocacy, service development, policy, and other purposes. It often implies func-

tional outcomes, such as personally meaningful activities and relationships, but also refers to an individual's process of building hope and autonomy.

## Prevalence

All mental illnesses, including mood, anxiety, personality, and schizophrenia-spectrum disorders, are associated with an increase in co-occurring substance use disorder compared to the general population (20-22). Furthermore, individuals with the most severe psychiatric disorders tend to have the highest rates of co-occurring substance use disorders. For example, in the largest general population survey of comorbidity conducted to date, the rate of lifetime alcohol or drug use disorder in the general population was approximately 17%, compared to 47% for people with schizophrenia, 56% for people with bipolar disorder, and about 30% for people with another mood disorder or an anxiety disorder (21). These prevalence rates are consistent with many other surveys of people with schizophrenia or bipolar disorder, which indicate lifetime prevalence rates for substance use disorders of about 50% (23-25) and rates for current or recent substance disorder in the range of 25-35% (26-28).

Demographic, family history, and personality characteristics of individuals prone to substance use disorders are similar in persons with severe mental illness and in the general population. Male sex, younger age, lower levels of education, and single marital status are all related to higher vulnerability to substance use disorders, with race/ethnicity often related to the type of substance misused but not the overall prevalence rate (24). Family history of substance use disorder is related to substance use disorder in persons with severe mental illness (29,30), as well as history of conduct disorder and adult antisocial personality disorder (31,32). Individuals with severe mental illness living in urban vs. rural areas do not tend to differ in overall rates of substance use disorder, although the types of substances may vary as a function of their market availability (33). Setting is also related to prevalence (34): individuals with severe mental illness receiving emergency or acute care treatment, as well those who are homeless (35,36) or incarcerated (33,37), have increased rates of substance use disorder.

## Psychosocial interventions

Many recent reviews have addressed the rapid development of psychosocial interventions for people with dual diagnosis (6-8,38). The most recent systematic review identified 45 independent controlled clinical trials (7). Despite methodological problems, these studies show the following: a) there is inconsistent evidence to support any individual psychotherapy intervention; b) peer-oriented group interventions directed by a professional leader, despite heterogeneity of clinical models, are consistently effective in helping clients to reduce substance use and to improve other outcomes; c) contingency management also appears to be effective in reducing substance use and improving other outcomes, but has been less thoroughly studied and rarely used in routine programs; d) long-term (one year or more) residential interventions, again despite heterogeneity of models, are effective in reducing substance use and improving other outcomes for clients who have failed to respond to outpatient interventions and for those who are homeless; e) intensive case management, including assertive community treatment, consistently improves residential stability and community tenure, but does not consistently impact substance use; and f) several promising interventions, including family psychoeducation, intensive outpatient programs, self-help programs, and jail diversion and release programs, have received minimal research attention but warrant further study.

## Pharmacological interventions

Pharmacological management of both the psychiatric and the substance use disorder is an important foundation of the treatment of clients with co-occurring severe mental illness and substance use disorder. In all of the above psychosocial studies, clients in psychosocial treatment research also received medication management, which was rarely accounted for in analyses. Research on the effects of medications themselves, however, is in its infancy. Thus far research suggests two main points. First, medications shown to be effective for the treatment of alcohol disorders in the general population, such as disulfuram and naltrexone, are probably effective also in clients with serious mental illness (9,39). Second, some medications that treat the mental illness may lead to reduction in the severity of the substance use disorder. Antidepressants appear to reduce not only symptoms of depression but also alcohol use in clients with major depression and alcohol disorder (40). Mood stabilizers are active not only on mania but also on alcohol use in clients with bipolar disorder and comorbid alcohol dependence (41,42). Typical antipsychotics improve the symptoms of schizophrenia but have little effect on co-occurring substance use. Most of the newer (atypical) antipsychotics are equally effective as the typical antipsychotics in improving schizophrenia symptoms and may offer some benefit in reducing craving or substance use, but research is preliminary (43). Clozapine is clearly the most powerful drug in treating schizophrenia symptoms and, at least in quasi-experimental studies, appears to be at the same time the most effective antipsychotic medication in relation to substance use.

## Implementation of dual diagnosis programs

Experience with demonstration projects (44) as well as the recent National Evidence-Based Practices Project (10,45)

identify several factors that are critical for successful implementation and maintenance of dual diagnosis programs. These include clear guidelines regarding mission and philosophy, active leadership, comprehensive reorganization, longitudinal training and supervision, and quality improvement.

### Course, outcomes, and recovery

As has been clear for many years, the natural course of severe mental illness for most people trends toward improvement, remission of symptoms, and recovery of functioning and quality of life over time, provided the affected individual does not suffer early mortality related to the illness (46). The same is true for individuals with alcohol use disorders (47). For individuals with co-occurring disorders, there has been little longitudinal evidence, though 3-year follow-ups do indicate steady improvements (48-50). Our recent 10-year prospective follow-up shows that steady movement toward recovery is the modal path (51). In this study, dual diagnosis clients themselves identified recovery outcomes and cutoffs: living independently, working in a competitive job, having regular contact with friends who were not substance users, expressing positive quality of life, actively managing substance use disorder, and controlling psychiatric symptoms. The major findings were the following: a) clients improved on all of these outcomes steadily over 10 years, b) the six domains were minimally related to one another, and c) the timing and sequence of movement toward recovery varied widely across clients. In other words, some became employed first, while others made progress in other domains first. We interpreted these findings to mean that recovery is expectable and normative, and that recovery occurs in individual patterns, domains, and rates. We also found that early mortality was common among those who did not attain remission of their substance use disorders (51).

## PROGRAM IMPLICATIONS

### Mission and philosophy

The clearest implication of the research on prevalence is that all programs for people with severe mental disorders should be considered dual diagnosis programs. Clients with co-occurring disorders are the norm rather than the exception. Every mental health clinician and every mental health program should embrace this reality and adopt reasonable modifications. Specialty teams will simply not suffice, because many clients will be left undiagnosed, untreated, and without needed supports for recovery. Further, many programmatic elements will not be tailored for the needs of dually disordered clients.

Longitudinal research shows that recovery is not only possible but appears to be the modal process for people with dual diagnoses. Nevertheless, many clients, families, and clinicians experience severe short-term problems and, for understandable reasons, manifest discouragement, hopelessness, and despair. They often have little or no information regarding the availability of effective treatments and the possibilities for long-term recovery. These findings imply an ethical imperative to provide education and hope. Hope is an essential aspect of the process of recovery (52-54). Accordingly, hopefulness and a realistic expectation of dual recovery inform the philosophy of dual diagnosis treatment. All clients can be seen as having potential to recover, and all clinicians can be helpful by conveying a realistic message of optimism regarding long-term recovery.

### Leadership

The change from a single diagnosis to a dual diagnosis orientation requires many people to modify their attitudes, knowledge, and behaviors. This will not occur quickly. Above all it necessitates leadership. Based on the National Evidence-Based Practices Project (10) and other experiences (44,55), we recommend that leadership be construed in tiers of responsibility. At the ground level, all clinicians, clients and families have roles to play. They need to believe in dual recovery, become educated about their respective roles, and develop the skills and supports to facilitate recovery. They also need to be empowered to help plan and direct the changes. At the level of program managers, supervisors and trainers, leadership involves carefully planning to modify many programs and to facilitate learning for all staff. At the level of director and governance, leaders need to articulate vision, values and commitment. They also need to direct the strategy to insure that organizational structures (e.g., medical records) and finances support the changes.

### Comprehensive reorganization

Dual diagnosis typically ramifies into many areas of one's life, and research shows that recovery encompasses different pathways, domains, styles, preferences and timing from one individual to the next. An individualized approach to intervention needs to address several areas of recovery, offer education and intervention choices, and be based on shared decision-making (56). This level of individualization will permit each client to pursue a path that he or she believes in.

Further, all programs need to be modified to insure that they are optimally helpful for clients with dual disorders. For example, medication management needs to avoid dangerous interactions and potentially addictive medications, such as benzodiazepines (57). Supported employment services need to focus on jobs and supports that enhance abstinence (58). Skills training needs to address managing drug purveyors as well as making friends (59).

### Training

Training should address the generic needs of all staff as well as the needs of those who are specialists. Because of the high prevalence of substance use disorders in people with severe mental illness, all clinicians need basic training in working with dually diagnosed individuals (60). This includes information about the interactions between substance use and psychiatric illness, clues and instruments for recognizing and assessing substance use problems, an understanding of the concepts of stages of change (61) and stages of treatment (62), treatment planning skills, strategies for engaging clients in treatment and enhancing their motivation for sobriety, and the principles of collaborating with family members and other significant persons in treatment (59). In addition, clinicians who specialize in the treatment of persons with a dual disorder need to develop additional expertise in specific therapeutic modalities, including individual cognitive-behavioral therapy, group-based motivational and skills training approaches, family therapy, as well as skills for addressing common problem areas such as housing instability, legal problems, health problems, and trauma/victimization (59,63,64).

### Special programs: group counseling and housing

Peer-oriented groups are the centerpiece of dual diagnosis treatment. The evidence shows that groups are the most effective first-line intervention to help people recover from co-occurring substance use disorder. The groups can be organized in different ways, using different models, meeting at different intensities, and for clients at different stages of recovery. There is as yet no evidence that one type of group is more effective than another; the key is steady attendance for several months, probably at least a year. Therefore, we recommend offering several options so that clients can find a group in which they feel comfortable.

Long-term residential treatment is the only established intervention for clients who do not respond to outpatient integrated treatments. As with group interventions, effective residential treatment programs vary considerably. The common elements of effective programs include flexible entry and discharge, integrated treatment for mental health and substance problems, a focus on employment and other aspects of rehabilitation, graduated approaches to lapses or relapses, and expected tenure of one year or more (65).

Of course, not all clients want or qualify for long-term residential treatment, and programs probably need a variety of other housing approaches (66). For example, a "housing first" approach helps many clients to escape from homelessness and to become motivated for further goals (67). There is also some evidence for a continuum approach to housing (68). Because housing is a primary goal for many clients and the evidence for specific approaches is not strong, providing multiple options makes sense here also.

### Quality improvement

Another critical element of organization is quality improvement. This can take many forms, but most current approaches involve system engineering, data-based supervision, computerized medical records, electronic decision support systems, fidelity reviews, and intensive review of individual clients who are not making progress (69). A full discussion of quality improvement mechanisms is beyond the scope of this paper, but commitment to quality improvement is essential for successful program implementation.

## CONCLUSIONS

As the literature on dual diagnosis continues to develop rapidly, programmatic implications for treating clients with co-occurring disorders become more specific. This paper overviews several steps that all mental health leaders should consider, including efforts to reconfigure mental health programs into dual recovery programs. We strongly urge further research with greater standardization and methodological rigor to move this field ahead (70).

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